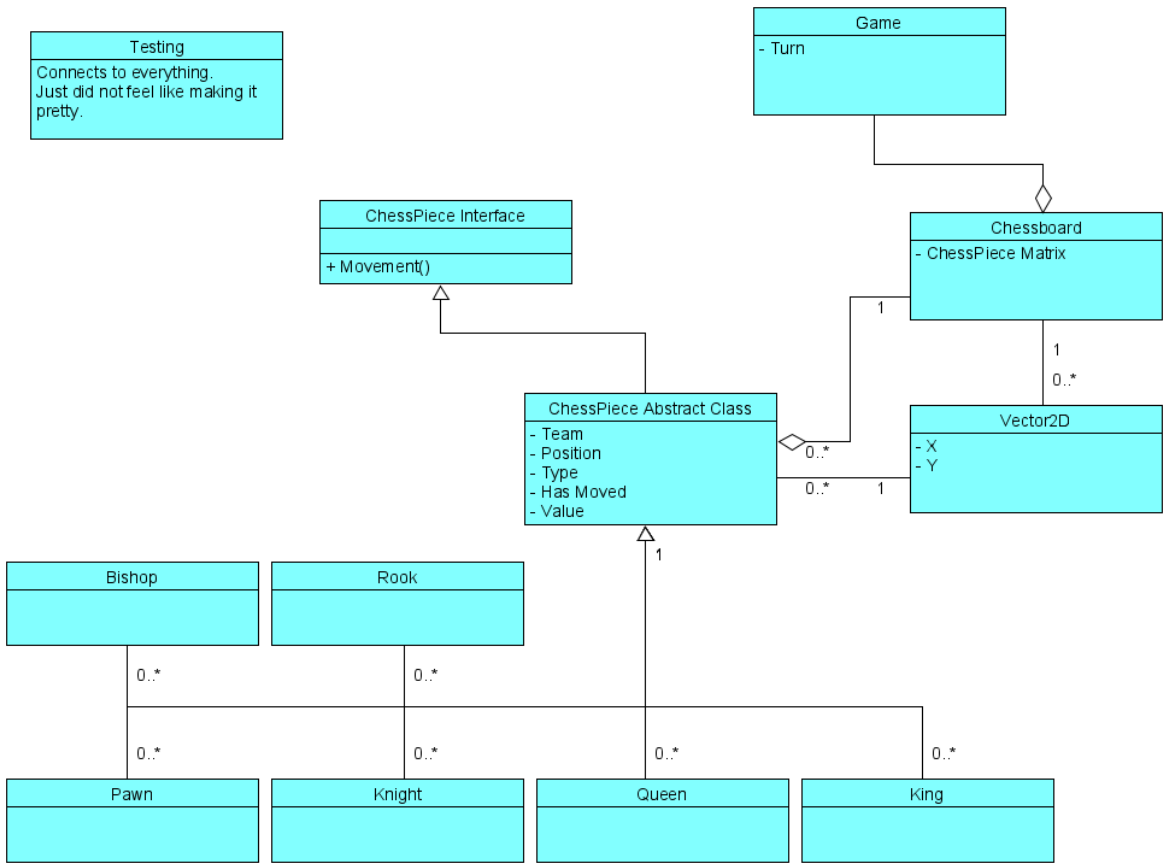
The plan is to create a fully working chess game with a user interface. The game should include all moves that can be done in an official chess game. This includes castling, en passant, and switching a pawn on the opponent's back row.
I will use Processing 4 to code the project, since it is based on Java and has built in features to make a visual interface. This was asked, and was approved by the teacher, though not in great detail.
I will use an abstract class and interface that all the chess pieces will inherit, since they are all similar, but need different rules for their movement.

In the process of creating the chess game, did I get very far very quickly. To use the approximately 50 hours that was required, I decided to expand the game with extra features. The expanded class diagram will be shown below, as well as the class diagram from the original plan .

The expanded plan started with a way to undo the last move, score keeping, and saving and loading the game. Again in the process of making these and testing everything, was there still quite a bit of time left.And as I enjoyed making the program, I decided to use the full 50 hours, and planned a few additional features. I planned on making different game modes, an expanded board option, and a start menu to select play style and a way to conveniently choose to load a saved game.

I decided not to use any design patterns, as I had already finished most of the program when those were introduced. In the end, as I finished the application, did I notice that the project was supposed to be handed in as an IntelliJ project. Even though it was approved by the teacher in the early stage that I could use Processing, did I decide not to gamble on the project, and re-code it in IntelliJ with the processing liberties instead. As Processing 4 is based on Java, was it possible to salvage a lot of the code, though still quite a bit had to be reprogrammed to work with classic java structure.

The original plan class diagram:



The expanded plan class diagram: